WE CLAIM:

1. A composition comprising a preselected population of lymphocytes having a chimeric receptor or T-cell receptor reactive with a tumor antigen and an endogenous T-cell receptor reactive with a preselected strong antigen.

2. The composition of claim 1 wherein the strong antigen is an allogeneic agent.

3. The composition of claim 1 wherein the lymphocytes are T-cells.

4. The composition of claim 1 wherein the tumor antigen is derived from ovarian cancer.

5. The composition of claim 1 wherein the tumor antigen is derived from a melanoma.

6. The composition of claim 1 wherein the chimeric receptor is a recombinant protein.

7. The composition of claim 1 wherein the chimeric receptor is a single chain Fv receptor.

8. The composition of claim 1 wherein the strong antigen comprises allogeneic peripheral blood cells.

9. The composition of claim 1 wherein the strong antigen is a virus.

10. The composition of claim 1 wherein the chimeric receptor is Mov-γ.

11. A lymphocyte having a T-cell receptor reactive with an allogeneic agent and a chimeric receptor reactive with a tumor antigen.

12. A lymphocyte comprising a T-cell receptor reactive with a strong antigen and a chimeric receptor reactive with a tumor antigen, wherein the lymphocyte can be activated *in vivo* with the strong antigen.

13. The lymphocyte according to claim 12 wherein the strong antigen is an allogeneic agent.

14. The lymphocyte according to claim 12 wherein the strong antigen is a viral agent.

15. The lymphocyte according to claim 13 wherein the allogeneic agent is donor peripheral blood cells.

16. A method of treating a patient with preselected dual specificity lymphocytes comprising:

selecting for lymphocytes reactive with a strong antigen *ex vivo*;

transducing the lymphocytes with a chimeric receptor gene, said gene encoding a receptor which is reactive with a tumor antigen;

administering an effective amount of the lymphocytes to the patient; and

immunizing the patient with the strong antigen.

17. The method of claim 16 wherein the strong antigen is an allogeneic agent.

18. The method of claim 16 wherein the strong antigen is a viral agent.

19. The method of claim 17 wherein the allogeneic agent is peripheral blood.

20. The method of claim 16 wherein the tumor antigen is derived from ovarian cancer.

21. The method of claim 16 wherein the tumor antigen is derived from a melanoma.

22. The method of claim 20 wherein the ovarian cancer derived antigen is folate binding protein.

23. The method of claim 18 wherein the viral agent is Epstein Barr virus.

24. The method of claim 18 wherein the viral agent is Flu-virus.

25. The method of claim 16 wherein the chimeric receptor is Mov-γ.

26. The method of claim 16 further comprising administering an effective amount of IL-2.

27. The method of claim 16 wherein the administering is carried out by intravenous injection.

28. A method of treating a patient having a tumor with dual specificity lymphocytes preselected for their reactivity with a strong antigen comprising:

administering an effective amount of preselected dual specificity lymphocytes; and

immunizing the patient with the strong antigen.

29. The method of claim 28 wherein the strong antigen is an allogeneic agent.

30. The method of claim 28 wherein the strong antigen is a viral agent.

31. The method of claim 29 wherein the allogeneic agent is peripheral blood.

32. The method of claim 28 wherein the tumor antigen is derived from ovarian cancer.

33. The method of claim 28 wherein the tumor antigen is derived from a melanoma.

34. The method of claim 32 wherein the ovarian cancer derived antigen is folate binding protein.

35. The method of claim 30 wherein the viral agent is Epstein Barr virus.

36. The method of claim 30 wherein the viral agent is Flu-virus.

37. The method of claim 28 wherein the chimeric receptor is Mov-γ.

38. The method of claim 28 further comprising administering an effective amount of IL-2.

39. The method of claim 28 wherein the administrating is carried out by intravenous injection.

40. A pharmaceutical composition comprising:

a population of lymphocytes containing a chimeric receptor reactive with a tumor antigen and preselected for reactivity with a strong antigen; and

a pharmaceutically acceptable carrier.

41. A method of preparing preselected dual specificity lymphocytes comprising:

selecting for lymphocytes reactive with a strong antigen *ex vivo*; and

transducing the lymphocytes with a chimeric receptor gene, said gene encoding a receptor which is reactive with a tumor antigen.

42. The method of claim 41 wherein the strong antigen is an allogenic agent.

43. The method of claim 41 wherein the tumor antigen is folate binding protein.